

IN THE CLAIMS:

Please amend claims 14-16 and 18-26 and cancel claim 17, without prejudice or disclaimer, as follows:

Claims 1-13 (Cancelled)

14. (Currently Amended) A method for performing a connection admission control in an asynchronous network node (1), comprising the steps of:

admitting (S110) a requested new connection, if an increased value representing a total effective bandwidth is not larger than a predetermined value,

~~characterized by the steps of:~~

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining (S106) a value representing the effective bandwidth of the requested new connection by using the stored approximation parameters, and

increasing (S107) a value representing the total effective bandwidth by the determined value so as to obtain the increased value,

wherein the value representing the effective bandwidth of the requested new connection is determined by using the following equation,

$$\underline{b_{eff} = a \cdot PCR^{\alpha} \cdot SCR^{\beta} \cdot C^{\gamma}}$$

wherein a , α , β , and γ represent the stored approximation parameters, PCR represents a peak cell rate of the requested connection, SCR a sustainable or average cell rate of the requested connection and C a link capacity, and

wherein the approximation is a linear approximation of a function which is a logarithm of the traffic parameter function.

15. (Currently Amended) A method according to claim 14, wherein:

~~characterized in that~~

different approximation parameters are stored for different maximum cell loss ratios, and wherein the value representing the effective bandwidth of the requested new connection is determined (~~S106~~) in dependence on a desired maximum cell loss ratio by selecting the stored approximation parameters according to the desired maximum cell loss ratio.

16. (Currently Amended) A method according to claim 14, wherein:

~~characterized in that~~

the predetermined value is a link capacity of a multiplex transmission link used for establishing the requested connection.

Claim 17. (Cancelled)

18. (Currently Amended) A method ~~according to claim 14~~, for performing a connection admission control in an asynchronous network node, comprising the steps of:

admitting a requested new connection, if an increased value representing a total effective bandwidth is not larger than a predetermined value,

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining a value representing the effective bandwidth of the requested new connection by using the stored approximation parameters, and
increasing a value representing the total effective bandwidth by the determined value so as to obtain the increased value,

~~characterized in that~~

wherein the approximated traffic parameter function is a function of a ratio between the peak cell rate and the link capacity and of a burst probability of the requested connection.

19. (Currently Amended) A method ~~according to claim 17~~ for performing a connection admission control in an asynchronous network node, comprising the steps of:

admitting a requested new connection, if an increased value representing a total effective bandwidth is not larger than a predetermined value,

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining a value representing the effective bandwidth of the requested new connection by using the stored approximation parameters, and

increasing a value representing the total effective bandwidth by the determined value so as to obtain the increased value, comprising

~~characterized by~~

a step of checking (S101) the ratio between the peak cell rate and the link capacity, when a connection request is received, wherein the value representing the effective bandwidth of the requested new connection is determined (S104) only on the basis of the peak cell rate, if the ratio between the peak cell rate and the link capacity exceeds a predetermined ratio.

20. (Currently Amended) A method according to claim 14, wherein:

~~characterized in that~~

different approximation parameters obtained by approximating different regions of the traffic parameter function are stored, and wherein the approximation parameters are selected in accordance with the region in which traffic parameters of the requested connection are located.

21. (Currently Amended) A method according to claim 16, wherein:

~~characterized in that~~ the value representing the effective bandwidth of the requested new connection is determined (S106) as a fraction of the link capacity, and wherein the predetermined value is 1.

22. (Currently Amended) A method according to claim 14, wherein:

~~characterized in that~~

said value representing the total effective bandwidth or both said value representing the total effective bandwidth and said predetermined value are updated when the link capacity changes.

23. (Currently Amended) An apparatus for performing a connection admission control in an asynchronous network node ~~(1)~~, comprising:

comparing means ~~(15)~~ for comparing an increased value representing a total effective bandwidth with a predetermined value, and

control means ~~(16)~~ for admitting a requested new connection, if the increased value representing the total effective bandwidth is not larger than the predetermined value,

~~characterized by:~~

storing means ~~(13)~~ for storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining means ~~(12)~~ for determining a value representing an effective bandwidth of the requested new connection by using the stored approximation parameters, and

counting means ~~(14)~~ for increasing a value representing the total effective bandwidth by the determined value so as to obtain the increased value,

wherein the value representing the effective bandwidth of the requested new connection is determined by using the following equation,

$$b_{\text{eff}} = a \cdot \text{PCR}^{\alpha} \cdot \text{SCR}^{\beta} \cdot C^{\gamma}$$

wherein a, α , β , and γ represent the stored approximation parameters, PCR represents a peak cell rate of the requested connection, SCR a sustainable or average cell rate of the requested connection and C a link capacity, and

wherein the approximation is a linear approximation of a function which is a logarithm of the traffic parameter function.

24. (Currently Amended) An apparatus according to claim 23, wherein:

~~characterized in that~~

said asynchronous network node is an ATM switch-(1).

25. (Currently Amended) An apparatus according to claim 23, further comprising:

~~characterized by~~ input means (11) for inputting a desired cell loss ratio, wherein different approximation parameters for different cell loss ratios are stored in said storing means (13), and wherein said determining means (12) is arranged to determine the value representing the effective bandwidth of the requested connection by using approximation parameters corresponding to an input cell loss ratio.

26. (Currently Amended) An apparatus according to claim 23, wherein:

~~characterized in that~~

said storing means (13) is arranged to store different approximation parameters for different approximation regions, wherein means is arranged to compare traffic parameters of the requested connection with boundary values defining the different approximation regions, and wherein the determining means (12) is arranged to use approximation parameters in accordance with the result of comparison.